DOCUMENT RESUME

ED 211 922 CS 006 414

AUTHOR Strader, Susan G.; Joy, Flora C.
TITLE Assessment of Content Text Difficulty by Elementary and Middle School Personnel.
PUB DATE Dec 81
NOTE 8p.; Paper presented at the Annual Meeting of the American Reading Forum (2nd, Sarasota, FL, December 10-12, 1981).

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Content Area Reading; Elementary Education; Elementary School Science; Language Arts; Mathematics; Middle Schools; *Readability; *Reading Research; Social Studies; *Teacher Attitudes; *Textbook Evaluation

ABSTRACT

Research has shown that secondary school teachers are generally unable to rank text passages accurately according to their reading difficulty. To determine if this was true of elementary and middle school personnel, 177 teachers, administrators, and supervisors attending a summer reading workshop were asked to rank order each of five 100-word passages in each of the content areas of science, social studies, language arts, and mathematics according to their reading difficulty for students. Results showed that participants were able to rank social studies passages most accurately followed by mathematics and science passages. Of particular interest, however, were the language arts rankings, which subjects were generally unable to rank correctly, despite the fact that many of them had had courses with readability components. Other results indicated that classroom teachers' rankings were consistently more correct than were those of administrators and that grade level taught was not a determinant of ability to order passages correctly. (HOD)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☐ This document has been reproduced as received from the person or organization originating it.
☒ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

ED211922

ASSESSMENT OF CONTENT TEXT DIFFICULTY BY ELEMENTARY AND MIDDLE SCHOOL PERSONNEL

by

Susan G. Strader

Flora C. Joy

East Tennessee State University
Johnson City, Tennessee 37614

A Paper

Presented at the

Second Annual Meeting

of the

AMERICAN READING FORUM

December 10-12, 1981

Sarasota, Florida

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Susan G. Strader
Flora C. Joy

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

CS806416

ASSESSMENT OF CONTENT TEXT DIFFICULTY BY ELEMENTARY AND MIDDLE SCHOOL PERSONNEL

Susan G. Strader

Flora C. Joy

East Tennessee State University
Johnson City, Tennessee 37614

Actual observation of classroom activities indicates that most teachers depend upon a single text and ditto materials to provide printed material for their students (Durkin, 1979). In the elementary school, particularly, there is a reliance on the textbook to provide the basis for activities, questions and teaching techniques. The seeming reluctance of teachers to provide supplementary materials provided a direction for study.

In a recent survey, 56 elementary and middle school teachers were asked to list five reasons they believed more supplementary materials were not used in classrooms. The responses were tallied as to frequency of occurrence. The most frequent (n=54) response was an expected one, that of not enough time to search for and prepare material. Second (n=43) was a perceived lack of material available in the schools.

Third (n=40), teachers claimed they had difficulty judging supplementary material grade levels. If this survey is representative, then perhaps it is relevant to evaluate teachers' abilities to judge relative difficulty of textual material. In an earlier study by Palmatier and Strader (1979), secondary teachers were found to be generally unable to rank passages accurately according to reading difficulty. It was of interest to the authors whether or not this finding was true of elementary and middle school personnel as well.

One hundred seventy seven people attending a summer reading workshop at East Tennessee State University were presented the task of rank ordering five 100-word passages in each of the content areas of science, social studies, language arts and mathematics.

METHOD

Subjects

The sample comprised 177 people attending a 1981 summer reading workshop at East Tennessee State University. (For the study, the subjects were considered as a total group and separately by employment category, level of students taught, administrative task, number of reading/language arts classes taken, and classroom organization.) The majority of those attending were classroom teachers in the elementary grades. Most of the administrators and supervisors attending were responsible for elementary and middle school levels. Eighty-seven percent of those attending had had at least three reading courses; 36 percent had taken the course Materials for Teaching Reading which contains a readability unit.

Procedures

Five 100-word passages were selected for each of the content areas of science, social studies, language arts and mathematics. The Spache Readability Formula (Spache, 1953), the Fry Graph (Fry, 1968), and the Dale Chall Readability Formula (Dale and Chall, 1948) were used to verify difficulty levels from third grade to eighth grade. Passages were from textbooks on the State of Tennessee Adopted Texts list.

Subjects were asked to rank order each set of passages according to reading difficulty for students. Sufficient time (20 minutes) was allotted so that all finished the task and completed the accompanying questionnaire describing categories of employment, etc.

The Statistical Package for the Social Sciences (SPSS, 1973) was used for computer analysis of the data. The parametric program portion provided frequency and percentage tabulation for each group and for the total sample on each of the twenty passages. Chi Square evaluations illustrated the associations between groups and accuracy of rankings.

Results

Several interesting results were found upon examination of the data. Generally, participants were able to rank social studies passages most accurately - percentages for five passages ranged from 38 percent to 50 percent correct. In mathematics the lowest percentage correct on a passage was 24 and the highest was 71. Science rankings ranged from 4 percent to 58 percent correct. Of particular interest, however, were the language arts rankings. Subjects were generally unable to rank those passages correctly; passage 1 - 7 percent, 2 - 7 percent, 3 - 7 percent, 4 - 35 percent, and 5 - 22 percent.

Chi Square values were computed in order to test the associations between the following categories and accuracy of rankings:

1. Employment category
2. Grade levels of students taught
3. Administrative tasks (if appropriate)
4. Number of reading/language arts courses taken
5. Classroom organization

Significant associations ($p<.05$) were found in seven out of twenty passages between accuracy in ranking and employment category. In only one instance was there a significant association between ranking and grade level of students taught. Five out of twenty associations were significant between administrative responsibility and ability to rank correctly. Number of reading and language arts courses taken was not significant to ranking, nor was the Materials for Reading course. Classroom organization was significant in seven out of twenty cases.

Classroom teachers were better able to rank passages than were those of other employment categories in the study. Their percentages correct were consistently higher than were those of administrators, supervisors and college students. Grade level taught was generally not a determinant of ability to correctly order passages. Elementary and middle school categories were analyzed combined and separately without significant results, and percentages correct were approximately equal.

Administrative and supervisory levels were studied with respect to subjects' abilities to rank passages. For the most part, those responsible for elementary and middle schools did better by percentage than did those responsible for system-wide or high school levels. Number of reading/language arts courses taken by subjects was not a determinant of ability to rank, although 32 of those in the study had had more than seven courses. Eighty-seven had completed three to five courses.

Type of classroom organization was significant in that those responsible for self-contained classrooms in all cases scored higher, by percentage, than did those responsible for departmentalized or special classes. Those in the study who had completed a materials for reading course did approximately as well as did those who had not had such a course.

DISCUSSION

While it is hazardous to generalize results to the entire population of school personnel, the authors believe that those examined are representative of school personnel in the region East Tennessee State University serves. Their training, years taught, and classroom organizations closely approximate regional data. In contrast to a study by Palmatier and Strader (1979) in which high school teachers were generally unable to rank passages, elementary and middle school teachers were able to do so with moderate success. It is interesting to note, however, that they were for the most part unable to rank

language arts passages, despite many having had courses which carry readability components. It may well be that instruction in readability calculation does not carry over to the sort of "holistic" eyeball determination of relative difficulty involved in the study.

On the basis of these results, a component will be added to a control group of students in language arts block of courses. Instructors will attempt to teach students how to look for various things which raise readability levels. A follow-up study is planned to determine whether or not this training increases ability to judge relative difficulty of language arts material.

Dale, E. and Chall, J. "A Formula for Predicting Readability: Instructions." Educational Research Bulletin, 27, February 1948, pp. 37-54.

Durkin, D. "What Classroom Observations Reveal About Reading Comprehension Instruction." Reading Research Quarterly. 1979, 4, 481-533.

Fry, E. "A Readability Formula That Saves Time." Journal of Reading, 1968, 11, 513-516; 575-578.

Palmatier, R.A., and Strader, S.G. "Teacher Performance in Assessment of Comparative Reading Difficulty of Content Materials." Reading: Theory, Research and Practice, Twenty-sixth Yearbook of the National Reading Conference, Milwaukee: National Reading Conference, 1979.

Spache, G. "A New Readability Formula for Primary-Grade Reading Materials." Elementary School Journal, 53, March 1953, pp. 410-413.

Statistical Package for the Social Sciences. Evanston, Illinois: Vogelback Computing, Northwestern University, 1973.